

GenCore version 5.1.6
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OM nucleic - nucleic search, using sw model

Run on: July 30, 2005, 15:25:34 ; Search time 257.941 Seconds
(without alignments)
4108.047 Million cell updates/sec

Title: US-10-617-978-14_COPY_62_240

Perfect score: 179
Sequence: 1 cggctgacgtcccggaac.....atgagaacgtgaaggtctga 179

Scoring table: IDENTITY NUC

Gapop 10.0 , Gapext 1.0

Searched: 4390206 seqs, 2959870667 residues

Total number of hits satisfying chosen parameters: 8780412

Minimum DB seq length: 0

Maximum DB seq length: 200000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database : N Geneseq_16Dec04:*

- 1: Geneseqn1980s:*
- 2: Geneseqn1990s:*
- 3: Geneseqn2000s:*
- 4: Geneseqn2001as:*
- 5: Geneseqn2001bs:*
- 6: Geneseqn2002as:*
- 7: Geneseqn2002bs:*
- 8: Geneseqn2003as:*
- 9: Geneseqn2003bs:*
- 10: Geneseqn2003cs:*
- 11: Geneseqn2003ds:*
- 12: Geneseqn2004as:*
- 13: Geneseqn2004bs:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	42.2	23.6	270	5	AAA89399 Scorpion
2	40.8	22.8	270	5	AAA89400 Scorpion
3	40.8	22.8	270	5	AAA89398 Scorpion
4	38	21.2	270	5	AAA89397 Scorpion
5	32.6	18.2	336	2	AAT90799 Rat perse
6	32.6	18.2	336	2	AAX60455 Partial s
7	32.6	18.2	336	2	AAX60459 WO9914235
8	32.6	18.2	391	2	AAX60460 WO9914235
9	32.6	18.2	515	8	ABZ53533 Aspergill
10	32	17.9	780	4	ABA89006 Escherich
11	32	17.9	2489	6	ABZ78877 E. coli C
12	32	17.9	2489	10	ADH80444 Escherich
13	32	17.9	2498	4	ABA89004 Escherich
14	32	17.9	2811	4	ABL25174 Drosophil
15	31	17.3	4590	5	AAH24065 Yeast AOD
16	30.6	17.1	582	6	ABN63438 Human can
17	30.4	17.0	13563	4	ABL06306 Drosophil
18	30.4	17.0	13629	4	ABL06290 Drosophil
19	30.2	16.9	473	3	AAC98441 Human col
20	30.2	16.9	1037	4	AAH34174 Human col

21	30.2	16.9	3144	13	ADR08046 Full leng
22	30.2	16.9	3378	6	AAK99410 DNA of AP
23	30.2	16.9	3379	10	ADB99514 Human MCM
24	30.2	16.9	3379	10	ADB99514 Human MCM
25	30.2	16.9	3379	12	ADO19247 Human PRO
26	30.2	16.9	3379	13	ADP54323 Human PRO
27	30.2	16.9	3379	13	ADP54323 Human PRO
28	30.2	16.9	3402	13	ADP23357 PRO polyP
29	30.2	16.9	3402	13	ACN37984 Tumour-as
30	30.2	16.9	3406	6	ABL66479 Lung canc
31	30.2	16.9	3406	6	ABK64397 Human ben
32	30.2	16.9	3406	6	ABN95130 Gene #162
33	30.2	16.9	3445	9	ACH03947 Human CDN
34	30.2	16.9	3445	10	ADJ56503 Human CDN
35	30.2	16.9	3458	12	ADL12594 Human ste
36	30.2	16.9	3466	8	AAK95018 Human DNA
37	30.2	16.9	3466	8	ACC51032 Human bla
38	30.2	16.9	38643	9	ABX76294 Lung can
39	30.2	16.9	38643	10	ADA03011 Mouse Ncf
40	30.2	16.9	38643	10	ADB72749 Mouse Ncf
41	30.2	16.9	38643	12	ADC85491 Mouse Ncf
42	29.8	16.6	726	6	ADM74606 Murine ca
43	29.8	16.6	726	8	ABK39306 DNA encod
44	29.8	16.6	726	8	ACA11635 Human lun
45	29.8	16.6	726	8	ACA02821 Lung can
			726	10	ADH46863 Human lun

ALIGNMENTS

RESULT 1

AAA89399
ID AAA89399 standard; cDNA; 270 BP.

XX AAA89399;

DT 11-SEP-2003 (revised)

DT 23-APR-2001 (first entry)

XX Scorpion sodium channel agonist cDNA clone ibjlc.pk008.f14.

XX Scorpion; venom: toxin; sodium channel agonist; anticonvulsant;

XX nontropic; cerebroprotective; insecticide; ss.

OS Hottentotta judaica.

XX key Location/Qualifiers

FT sig_peptide 1..63

FT mat_peptide 64..267

FT /*tag= a

FT /*tag= a

XX WO200078957-A2.

XX 28-DEC-2000.

XX 21-JUN-2000; 2000WO-US017048.

XX 22-JUN-1999; 99US-0140410P.

XX (DUPO) DU PONT DE NEMOURS & CO E I.

XX Herrmann R, Lee J, Wong JF;

XX WPI; 2001-050111/06.

XX P-PSDB; AAB20077.

XX New isolated polynucleotide encoding a scorpion toxin for treating epilepsy, degenerative disorders such as Huntington's disease, and neuronal death following stroke, and for creating plants that are insect-tolerant.

XX Claim 1(a); Page 57; 60pp; English.

XX The present sequence is that of a portion of the cDNA insert in clone
 CC ibj1c.pk008.f14 that encodes a protein showing 29.6% identity to an
 CC insecticidal toxin of *Orthochirus scrobiculosus*. The clone was isolated
 CC from a scorpion (*Buthotus judaicus*) telson cDNA library. The invention
 CC provides isolated nucleic acid sequences (see AAB89386-400) encoding
 CC scorpion toxins (see AAB20064-78) that are sodium channel modifiers. The
 CC invention also relates to the construction of a chimeric gene encoding
 CC all or part of the sodium channel modifier, in sense or antisense
 CC orientation, where expression of the chimeric gene results in production
 CC of altered levels of the sodium channel modifier in a transformed host
 CC cell. Sodium channel modifiers can be used to treat neurological problems
 CC involving abnormal functioning of excitatory amino acid synapses, e.g.
 CC epilepsy, Huntington's disease and neuronal death following stroke.
 CC Genetically engineered recombinant baculoviruses which express protein
 CC toxins capable of incapacitating an insect host can be used as biological
 CC insecticides. The nucleic acids can be used to create transgenic plants
 CC in which sodium channel agonists of the invention are expressed for
 CC improved insect tolerance. (Updated on 11-SEP-2003 to standardise OS
 CC field)

XX SQ Sequence 270 BP; 80 A; 34 C; 60 G; 96 T; 0 U; 0 Other;
 Query Match 23.6%; Score 42.2; DB 5; Length 270;
 Best Local Similarity 61.3%; Pred. No. 0.00012; Mismatches 43; Indels 0; Gaps 0;
 Matches 68; Conservative 0;

Qy 67 GAGATAATCCGGACTGCATTAAAGATCTGTCTGAGAACACCGGTGGATTACGGGTATTGCT 126
 Db 128 GTGATCATGATTATTGTGGCGACATTTCTGAAAGTACATGGAGTGAATTATGGTATTGTT 187

Qy 127 ACGCTTCCAAATCGTGGTGTGAATTTCTGAAGGATGAGACGTGAAGGTCT 177
 Db 188 GGSTCACCTCGTGTGGTGTGAATTTTGAAGAAGAAGACATCAATATTT 238

RESULT 2
 AAA89400
 ID AAA89400 standard; cDNA; 270 BP.
 XX AC AAA89400;
 XX DT 11-SEP-2003 (revised)
 DT 23-APR-2001 (first entry)
 XX DE Scorpion sodium channel agonist cDNA clone ibj1c.pk008.f14.
 XX KW Scorpion; venom; toxin; sodium channel agonist; anticonvulsant;
 KW nontropic; cerebroprotective; insecticide; ss.
 XX OS Hottentotta judaica.
 XX FH Key Location/Qualifiers
 FT sig_peptide 1..63
 FT mat_peptide 64..267
 FT /*tag= a
 FT /*tag= a
 XX FN WO200078957-A2.
 XX PD 28-DEC-2000.
 XX PF 21-JUN-2000; 2000WO-US017048.
 XX PR 22-JUN-1999; 99US-0140410P.
 XX PA (DUPO) DU PONT DE NEMOURS & CO E I.
 XX PI Herrmann R, Lee J, Wong JF;
 XX DR WPI; 2001-050111/06.
 DR P-PSDB; AAB20078.

PT New isolated polynucleotide encoding a scorpion toxin for treating
 PT epilepsy, degenerative disorders such as Huntington's disease, and
 PT neuronal death following stroke, and for creating plants that are insect-
 XX tolerant.
 XX PS Claim 1(a); Page 58; 60pp; English.
 XX CC The present sequence is that of a portion of the cDNA insert in clone
 CC ibj1c.pk008.f14 that encodes a protein showing 29.6% identity to an
 CC insecticidal toxin of *Orthochirus scrobiculosus*. The clone was isolated
 CC from a scorpion (*Buthotus judaicus*) telson cDNA library. The invention
 CC provides isolated nucleic acid sequences (see AAB89386-400) encoding
 CC scorpion toxins (see AAB20064-78) that are sodium channel modifiers. The
 CC invention also relates to the construction of a chimeric gene encoding
 CC all or part of the sodium channel modifier, in sense or antisense
 CC orientation, where expression of the chimeric gene results in production
 CC of altered levels of the sodium channel modifier in a transformed host
 CC cell. Sodium channel modifiers can be used to treat neurological problems
 CC involving abnormal functioning of excitatory amino acid synapses, e.g.
 CC epilepsy, Huntington's disease and neuronal death following stroke.
 CC Genetically engineered recombinant baculoviruses which express protein
 CC toxins capable of incapacitating an insect host can be used as biological
 CC insecticides. The nucleic acids can be used to create transgenic plants
 CC in which sodium channel agonists of the invention are expressed for
 CC improved insect tolerance. (Updated on 11-SEP-2003 to standardise OS
 CC field)

XX SQ Sequence 270 BP; 82 A; 33 C; 58 G; 97 T; 0 U; 0 Other;
 Query Match 22.8%; Score 40.8; DB 5; Length 270;
 Best Local Similarity 61.1%; Pred. No. 0.00038; Mismatches 42; Indels 0; Gaps 0;
 Matches 66; Conservative 0;

Qy 70 ATAATCCGGACTGCATTAAAGATCTGTCTGAGAACACCGGTGGATTACGGGTATTGCTACG 129
 Db 131 ATCATGATTATTGTGGCGACATTTGTAAGTACATGGAGTGAATTTATGGGTATTGTTGGG 190

Qy 130 CCTTCCAAATCGTGGTGTGAATTTCTGAAGGATGAGACGTGAAGGTCT 177
 Db 191 TCACCTCGTGTGGTGTGAATTTTGAAGAAGAAGACATCAATATTT 238

RESULT 3
 AAA89398
 ID AAA89398 standard; cDNA; 270 BP.
 XX AC AAA89398;
 XX DT 11-SEP-2003 (revised)
 DT 23-APR-2001 (first entry)
 XX DE Scorpion sodium channel agonist cDNA clone ibj1c.pk006.p4.
 XX KW Scorpion; venom; toxin; sodium channel agonist; anticonvulsant;
 KW nontropic; cerebroprotective; insecticide; ss.
 XX OS Hottentotta judaica.
 XX FH Key Location/Qualifiers
 FT sig_peptide 1..63
 FT mat_peptide 64..267
 FT /*tag= a
 FT /*tag= a
 XX FN WO200078957-A2.
 XX PD 28-DEC-2000.
 XX PF 21-JUN-2000; 2000WO-US017048.
 XX PR 22-JUN-1999; 99US-0140410P.
 XX PA (DUPO) DU PONT DE NEMOURS & CO E I.